The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

The Implementation Plan (IP) for Defense Nuclear Facilities Safety Board Recommendation 97-2 requires a quarterly status report. Enclosed is the Department of Energy's quarterly status report for the third quarter, Fiscal Year (FY) 2000.

The IP contains 30 milestones, 27 of which have been completed. All three of the remaining milestones are overdue. Recovery Plans, which were established to complete these milestones, are included in Attachment B to this report to chronicle progress. The Management Team is working very hard to complete all remaining milestones and to continue implementing the Nuclear Criticality Safety Program.

Activities aimed at implementing the Secretary of Energy's decision to transfer Los Alamos Technical Area 18 (TA-18) capabilities to another location were initiated during the quarter. A relocation program office has been established reporting to Defense Programs, and public meetings at each of the alternative locations were held following issuance of a Notice of Intent to prepare an Environmental Impact Statement. Defense Programs is committed to an orderly transfer of capabilities to a new location, and care will be taken to assure continuity of Departmental programs and commitments. My staff is involved in these activities and will work to assure that Nuclear Criticality Safety Program needs are met throughout the relocation process.

Regarding the Cerro Grande fire, TA-18 sustained only minimal damage and has already returned to operational status. Because of its location in the bottom of Pajarito Canyon, flooding is a major concern. The Burned Area Rehabilitation Team, directed by the U.S. Forest Service, with the cooperation and support of the U. S. Army Corps of Engineers, Los Alamos, and the Department of Energy, have worked expeditiously to mitigate the effects of erosion, and to minimize risks from additional fires and flooding. Mitigation activities, including construction of a dam and debris deflection structures up canyon from Kiva 1 and the SHEBA building, continue.

While the Department has not completed all Recommendation 97-2 Implementation Plan commitments, we have made significant progress and are working very hard to assure that the Nuclear Criticality Safety Program infrastructure is maintained for safe, secure, and efficient fissile material handling. We are committed to working with you in that regard.

Sincerely,

(Signed July 27, 2000)
David H. Crandall
Acting Assistant Deputy Administrator
for Research, Development, and Simulation
Defense Programs

Enclosure

cc (w/encl):
M. Whitaker, S-3.1

QUARTERLY STATUS OF THE IMPLEMENTATION PLAN
FOR
DEFENSE NUCLEAR FACILITIES SAFETY BOARD RECOMMENDATION 97-2
THIRD QUARTER FISCAL YEAR 2000

The Department of Energy (DOE) began implementing Defense Nuclear Facilities Safety Board Recommendation 97-2 in January 1998 by formally establishing the Nuclear Criticality Safety Program (NCSP). Each of the seven NCSP Tasks (Critical Experiments, Benchmarking, Analytical Methods, Nuclear Data, Training and Qualification, Information Preservation and Dissemination, and Applicable Ranges of Bounding Curves and Data) is dependent upon the others for a successful program. Implementation of the NCSP is being accomplished according to the Five-Year NCSP Plan which was published in August 1999 and is currently being updated.

The Nuclear Criticality Safety Program Management Team (NCSPMT) and the Criticality Safety Support Group (CSSG) are performing their respective chartered functions in supporting the Responsible Manager's execution of the Implementation Plan (IP). During the quarter, the NCSPMT and CSSG coordinated activities aimed at completing IP milestones and continued to provide justification necessary for maintaining funding support. Of particular note was CSSG participation in Principle Secretarial Officer reviews of criticality safety program self assessments. These self assessments were conducted by Departmental contractors in response to the Secretarial initiative aimed at strengthening Departmental criticality safety programs. The CSSG was asked by the Offices of Defense Programs (DP) and Environmental Management (EM) to provide technical review of criticality safety self-assessments performed by DP and EM site contractors prior to transmitting the reports to the Office of Environment, Safety and Health for its review.

Activities aimed at implementing the Secretary’s decision to transfer Los Alamos Technical Area (TA)-18 capabilities to another location were initiated during the quarter. A relocation program office has been established reporting to Defense Programs, and public meetings at each of the alternative locations were held following issuance of a Notice of Intent to prepare an Environmental Impact Statement.

Regarding the Cerro Grande fire, TA-18 sustained only minimal damage and has already returned to operational status. However, because of its location in the bottom of Pajarito Canyon, flooding is a major concern. The Burned Area Rehabilitation Team, directed by the U.S. Forest Service, with the cooperation and support of the U. S. Army Corps of Engineers, Los Alamos, and the Department of Energy, have worked expeditiously to mitigate the effects of erosion and to minimize risks from additional fires and flooding. Mitigation activities, including construction of a dam and debris deflection structures up canyon from Kiva 1 and the SHEBA building, continue.

This quarterly report provides a status of activities for each of the seven NCSP elements, as well as Recommendation 97-2 IP Milestones and Recovery Plans. Steady progress is being made in all seven of the NCSP task areas and in completing the three remaining milestones. There are two attachments to this report: Attachment A is a table depicting the status of all IP Deliverables and Milestones, and Attachment B contains Recovery Plans for the three remaining milestones. The Management Team is working very hard to complete all remaining milestones and to continue implementing the NCSP.

Accomplishments and key issues in each of the program task areas which arose during the period are as follows.

Critical Experiments

A status of experimental activities conducted at the Los Alamos National Laboratory (LANL) during the period by critical assembly is as follows:

Flattop: Flattop was inoperable for this entire quarter due to a malfunction of one of the control rod drive systems and the subsequent declaration of a Technical Safety Requirement violation. A path forward for restart of Flattop, which includes replacement of the 50-year old control rod drive system and the performance of a full readiness assessment, has been developed and submitted to the Department of Energy, Los Alamos Area Office (DOE/LAAO). The DOE/LAAO has approved this path forward for restart, but it is unlikely that Flattop will be operational for the remainder of this Calendar Year.

Comet/Zeus: Essentially all of the measurements that can be made for this configuration have been completed. No further measurements will be made with Zeus until approval is received from DOE/LAAO to proceed with the remaining experiments. A request to continue with these experiments and all of the supporting safety documentation was submitted to DOE/LAAO in December 1999. The Comet machine has been defueled to assure fuel integrity while awaiting approval from DOE/LAAO to proceed.

SHEBA: Several SHEBA operations were performed in support of the four criticality safety classes held during the quarter and for operator training.

Godiva: Godiva assembly operations were terminated in the fourth calendar quarter of 1999 due to the discovery of a Potentially Inadequate Safety Analysis (PISA). The PISA originated when an error was discovered in a calculation performed by another group at Los Alamos. This calculation provided a part of the technical basis for DOE/LAAO's approval of a prior unreviewed safety question (USQ), hence the declaration of the PISA. The USQ for the PISA was originally submitted to DOE/LAAO for approval in the fourth calendar quarter of 1999 and then resubmitted on January 6, 2000. Approval of the USQ was received on April 11, 2000, but DOE/LAAO required the implementation of several additional controls prior to authorizing operations. The additional controls have been implemented, and the facility is awaiting DOE/LAAO's final approval to restart Godiva.

Planet: Planet operations were performed for all but one of the four criticality safety classes conducted during this quarter. A storm (and power outage/surge) during our most recent 5-day basic course caused one of Planet's systems to fail. Planet is currently inoperable but should be up and running within two weeks. Planet experiments to characterize the reactivity worth of waste matrix materials also continued during this quarter.

Benchmarking

The FY-2000 International Criticality Safety Benchmark Evaluation Project (ICSBEP) Working Group Meeting was held June 26, 27, and 28 in St. Petersburg, Russian Federation. Technical tours of the critical facilities at the Russian Research Center "Kurchatov Institute" in Moscow and at the Institute of Physics and Power Engineering (IPPE) in Obninsk were conducted on June 29 and 30, respectively. Representatives from the United States, United Kingdom, Russian Federation, France, Japan, Yugoslavia, and Spain attend this meeting. Representatives from Israel provided technical assistance with independent reviews, but were unable to attend. This was the first ICSBEP Meeting to be held in the Russian Federation and was made possible by an invitation

from the Russian Deputy Ministry of Atomic Energy, B. Nigmatulin to DOE Undersecretary E. Moniz.

Twenty-two of the originally planned 25 evaluations were submitted to the ICSBEP Working Group for consideration. Twenty-one of these evaluations were approved for publication in the 2000 Edition of the "International Handbook of Evaluated Criticality Safety Benchmark Experiments" (subject to satisfactory resolution of all ICSBEP Working Group comments). Nearly half (9) of the newly approved evaluations were contributed from outside the United States.

If the action items on all of the newly approved evaluations are completed in time for publication, the 2000 Edition of the Handbook will contain 284 evaluations representing 2,350 benchmark configurations. An additional 503 configurations are described and evaluated, but are not considered to be of benchmark quality. Highlighted in the 2000 Edition of the Handbook are:

- Evaluations of highly-enriched uranium/silicon dioxide and plutonium/silicon dioxide systems that were recently performed at the IPPE, Russian Federation, for the U.S. National Spent Fuel Program that is managed through the Idaho National Engineering and Environmental Laboratory;

- The first sub-critical benchmark evaluation provided by Tim Valentine of Oak Ridge National Laboratory;

- An evaluation involving significant quantities of a major fission product, ^{149}Sm, that was provided by the French representatives;

- A series of highly concentrated ^{233}U solution experiments for which the majority of the fissions occur in the intermediate energy range that was provided by the Lawrence Livermore National Laboratory; and

- The first ZEUS experiment from the Los Alamos Critical Experiments Facility.

Analytical Methods

Staff at the Oak Ridge National Laboratory (ORNL) continued to maintain KENO software and assist the nuclear criticality safety community in the use of this software. This included modification of the SCALE/KENO criticality sequences to treat resonance shielding for multiple lattice pin-cell specifications in the same problem. The dynamic-core-storage-allocation algorithm in CENTRM is being enhanced, and the CENTRM theory documentation is being upgraded. A software-quality-assurance surveillance was performed on the SCALE System. Three SCALE/KENO-VI workshops were conducted during this quarter. ORNL led the effort to complete the draft ISO standard on administrative practices in criticality safety, and a presentation on this topic was made at a special conference on nuclear safety held in Japan. ORNL also provided technical support for the revision of American National Standards Institute/American Nuclear Society-8 Standards on mixed oxides and the actinides.

Staff at the Los Alamos National Laboratory continued to maintain MCNP software and assist the nuclear criticality safety community in the use of this software. In addition, an Introductory MCNP class was taught in Albuquerque in May. Also in May, a workshop on MCNP was presented during an American Nuclear Society (ANS) Topical meeting in Pittsburgh (PHYSOR 2000). Patches to MCNP 4C have been developed to enhance the new macro-body capability by

adding additional bodies and by allowing macro-body input on surface cards. It is anticipated that these patches will be integrated into the code during the next quarter. Finally, several bug corrections have been made to MCNP4C.

At the Argonne National Laboratory, a large number of ICSBEP benchmark calculations using VIM for a variety of plutonium systems have been completed. A total of 67 cases from PU-MET-FAST-001, -002, -011, -022, -024, -027, -031; PU-COMP-MIXED-001 and –002; and PU-SOL-THERM-001, -002, and –006 were analyzed. Each case was analyzed once with the ENDF/B-V library, and again with the ENDF/B-VI and JEF-2.2 libraries. The VIM results were very similar to the MCNP results cited in the ICSBEP benchmark reports, and displayed broadly consistent differences between libraries. A paper was presented at the ANS PHYSOR 2000 Meeting, "Monte Carlo Source Convergence and the Whitesides Problem." Work has begun on collating the processing details for the 700 nuclides in the various VIM libraries.

During this quarter, significant administrative support was rendered to the NCSP in the development of user-survey material and the presentation of Analytical Methods work at the annual NCSP review conducted in conjunction with the NCTSP meeting in Albuquerque. The NCSP Methods Advisory Group met during the ANS meeting in San Diego and developed proposals for two new areas of inter-laboratory collaborative work.

Nuclear Data

Various ORELA U-233 transmission runs were performed, as well as natural chlorine capture cross-section measurements. This data will be included in the SAMMY analysis for extracting sensitivity and covariance data. The chlorine resonance analysis is under way.

Testing of the U-233 resolved resonance evaluation has been carried out for thermal and intermediate energy benchmarks. Thermal benchmark results are very good, while the intermediate energy results suggest that the resonance parameter fit needs improvement.

Evaluation of the U-233 in the unresolved energy region, above 600 eV, has started. Measured data to be included in the evaluation have been selected for use in the SAMMY evaluation. The Al-27 evaluation has been completed. Covariance data has been generated. A report describing the evaluation is being prepared. At Los Alamos, for improved evaluation of U233 in the fast region, as well as actinide evaluations in general, work proceeds on a theory for predicting fission barrier heights and curvatures for use in Hauser-Feshbach calculations. This work makes use of state-of-the-art theoretical developments using a microscopic-macroscopic approach, and benefits from a new capability at Los Alamos to model better nuclear shapes during fission. It will also allow better predictions of the fission cross section and a more accurate treatment of neutron emission in competition with fission.

A report ORNL/TM-2000/129, "NEUTRON TOTAL CROSS SECTIONS OF U-235 FROM TRANSMISSION MEASUREMENTS IN THE ENERGY RANGE 2 keV to 300 keV AND STATISTICAL MODEL ANALYSIS OF THE DATA" on the U-235 unresolved region evaluation from 2.25 keV to 300 keV has been completed. Preparation of a Nuclear Science Engineering paper on the subject is under way. A paper, "NEW HIGH-RESOLUTION FISSION CROSS-SECTION MEASUREMENTS OF U233 IN THE 0.4 EV TO 700 KEV ENERGY RANGE," was published in the June 2000 issue of Nuclear Science and Engineering. A final report on the Oxygen-16 cross section evaluation has been prepared. A modification to the NJOY code to calculate penetrability for charge particle generation will be suggested to LANL.

LANL submitted the latest version of the NJOY Nuclear Data Processing System, NJOY 99.0, to RSICC this quarter, and it has been released for users. This version incorporates additional progress towards modern coding style, but it is still compatible with both F77 and F90. The constants have been upgraded to CODATA standards as recommended by a CSEWG working group. The biggest set of changes are designed to support MCNP4C and MCNPX, including the new unresolved probability-table capability supported by NCSP, new representations for angular distributions for elastic and File 6 reactions, detailed charged-particle production, incident charged particles, a photonuclear capability, and color plots. The new version of NJOY was used to reprocess all the materials in ENDF/B-VI.

At the Argonne National Laboratory, work on resonance theory continued, focused on improved treatment of the probability table methods in the unresolved resonance energy range. Coding for the zero temperature case has begun, and inclusion of the analytical results from all orders of weighted moments is being investigated.

Training and Qualification

This program element includes three sub-elements: (1) hands-on criticality safety training at Los Alamos; (2) training development; and, (3) criticality safety qualification program activities.

Hands-on criticality safety training continued at Los Alamos. One 2-day course, two 3-day courses, and one advanced 5-day course were held during the quarter. Two additional training courses are scheduled for the remainder of Fiscal Year 2000.

Fiscal Year 2000 funding for training development activities was provided in April 2000. Planning for new modules was initiated, but because of personnel commitments to other projects, work was not started until the last part of the this quarter. Two new training modules are being written: Criticality Accident Analysis Methods and Hand Calculation Methods, Part 1. It is planned to complete both of these modules during the last quarter of this Fiscal Year.

Regarding qualification activities, the Department is currently conducting a review and coordination of the draft page change to DOE O 420.1, which requires contractors to implement a training and qualification program for Nuclear Criticality Safety Staff. The Department is receiving technical comments which will be dispositioned by the office of Environment, Safety and Health. The Department received a letter from Board's staff on May 30, 2000, in which the staff indicated they have no comments on the proposed wording of the page change. It is anticipated that all issues will be resolved by September 2000, and the page change is expected to be officially released by the end of October 2000 (see Recovery Plans for IP Milestones 6.6.3.3 and 6.6.3.4).

Departmental criticality safety personnel are working towards qualification by December 2000 (see IP Recovery Plan for Milestone 6.6.4.2). At least sixteen Federal employees from around the complex plan to qualify. Milestone 6.6.4.2 will have been met when at least one Federal employee has qualified from each site which has a criticality safety program. The Department is tracking progress of these individuals. Currently, five individuals have met the requirements for qualification and are in the process of completing the documentation of their qualifications for management approval. The remainder plan to be qualified by November or December 2000.

Information Preservation and Dissemination

This program element currently contains two sub-elements: (1) the Criticality Safety Information Resource Center (CSIRC); and (2) NCSP web page development.

Regarding the CSIRC Program, the following progress has been made:

(1) A 3-compact disc set of the references to LA-10860 has been produced and distributed. This information is also available on the CSIRC web site.

(2) The references to LA-12808 have been scanned and will be made available on the web site during the next quarter.

(3) LA-13638, A Review of Criticality Accidents, has been printed and distributed widely throughout the international criticality safety community.

(4) The references to the Criticality Accident Report, LA-13638, have been scanned and are on the web site.

(5) A videotape of Hugh Paxton and Dave Smith together was made on June 9, 2000.

(6) The plans for a videotaping conference between the pioneers of LANL and the pioneers of ORNL are firmly set for September18-21, 2000, at the LANL University House. The videotape that Paxton and Smith made served as a dry run for quality control on the use of University House. The discussions at the video conference will include the development of consensus standards, the development of interactions on the floor between operating personnel and criticality safety practitioners, the generation of experimental data, the development of a basic document list for criticality safety personnel, calculations, hand calculation methods, basic terminology, and the medical effects of criticality safety. Younger criticality safety personnel will also be present to interact with the pioneers. All sessions will be unclassified. This videotaping conference is planned to be the first collection of videotapes to be part of the projected Heritage Video Collection. This series of videotapes will span the first 35 years of criticality safety in the United States (~1942-1977). The Heritage Video Collection is expected to become a valuable teaching tool for newcomers to the field of criticality safety. The recollections and reflections of the pioneers will also serve as original source material for the practices and operational philosophies of criticality safety that have become codified in American Nuclear Society consensus standards.

(7) Robert E. Rothe continues to make significant progress on his paper documenting the history of criticality safety at Rocky Flats. He is writing this paper under a contract with LANL ESH-6.

(8) The draft actinide report, LA-13151, was dormant this quarter but progress will be resumed during the next quarter.

(9) The WORM code was put up on the CSIRC web site, and a technical presentation thereon was made at the recent San Diego ANS Meeting.

(10) During the quarter, overhaul of the CSIRC web site was begun. A presentation on the philosophy, status, and plans for this web site was presented at the recent San Diego ANS Meeting.

The NCSP web site at Lawrence Livermore National Laboratory is being maintained and improved. This web site provides technical information and serves as a pointer to other web sites which are important to the NCSP. During the third quarter of Fiscal Year 2000, the NCSP web site highlights included:

(1) Availability of the Office of Oversight Nuclear Criticality Safety Field Reports was announced, and a hyperlink to the data source web site was provided;

(2) A status of the NCSP web site was provided at the ANS Annual Conference in San Diego on June 5, 2000. This presentation included actual demonstration of the web site on a portable PC platform. The demonstration was well received by more than 50 conference attendees who participated in the web site demonstration poster session;

(3) The web site's search engine was upgraded to meet all DOE cyber-security requirements;

(4) The report to the Secretary of Energy, "Nuclear Criticality Safety at Key Department of Energy Facilities" was announced, and a hyperlink to the data source web site was provided;

(5) The NCSP Feedback Questionnaire was placed on the web site, and input from the community was compiled and provided to the NCSPMT for consideration during the NCSP 5 Year Plan update process. This survey was fairly well subscribed as it received more than 130 responses from the criticality safety community;

(6) A hyperlink to the May 11, 2000, Department of Energy news release and briefing web page was added; and

(7) The quarterly report, "QUARTERLY STATUS OF THE IMPLEMENTATION PLAN FOR DEFENSE NUCLEAR FACILITIES SAFETY BOARD RECOMMENDATION 97-2 SECOND QUARTER FISCAL YEAR 2000" was added to the web page.

Finally, some interesting web site statistics have been collected:

- The site hosted more than 7,300 visitors in 1999;
- Over 130 users have filled out the NCSP Feedback Questionnaire;
- Currently, there are approximately 200 registered users;
- The site now contains 7 training modules, and there have been more than 1,600 downloads of these training modules;
- The Bibliographic references databases are the most visited section of the web site with over 9,000 accesses and searches on these databases.

Applicable Ranges of Bounding Curves and Data

During the third quarter of FY 2000, three of the five tasks were addressed, and progress reports were provided to the NCSP Review and the Nuclear Criticality Technology Safety Project workshop.
TPP Task 1 - *Implement use of optimization techniques for establishing bounding values.* Final drafting and resolution of ORNL/University of California Berkeley (UCB) comments were completed for the documentation of the prototypic SWAN-SCALE one-dimensional material-optimization code. Printing is now projected to occur in the mid-fourth quarter of FY 2000. The issuance of the codes is still not projected to occur before the end of 2001 during a subsequent release of the SCALE system. The subcontract with UCB was extended for modifying the code to geometric optimization routines.TPP Task 2 - *Investigate means to resolve or incorporate anomaly and discrepancy effects into bounding values.* The draft technical report on the investigation of

discrepancies in the NIST experiments has been completed and comments resolved. It is still expected to be published in the mid-fourth quarter of FY 2000.TPP Task 3 - *Investigate utilization of sensitivity and uncertainty (S/U) and statistical methods for identifying experimental needs.* Work was completed on the reduction of data but work was delayed on drafting the report about sensitivity and uncertainty studies that were performed on a previously proposed sludge transfer from the Hanford K-Basin to Tanks (K-T) and National Spent Nuclear Fuel (SNF) disposal parameters as compared to a suite of approximately 425 benchmarks. In lieu of continued drafting on the report, full papers and presentations/tutorials were developed and drafted for the November 2000 ANS Nuclear Criticality Safety Division meeting special invited session on "Sensitivity and Uncertainty Analysis Methods for Establishing Area of Applicability and Subcritical Margins." This session will air the capabilities, limitations and future directions of AROBCAD as explained through examples of the K-T, SNF, and other recent applications being documented in the draft report of the TPP Task 3.TPP Task 4 - *Develop guidance for interpolating and extrapolating bounding values.* Effort on this subtask currently continues at ORNL considering various methods for evaluating computational biases and uncertainties due to cross section and experimental benchmark measurements using various integral parameters derived from S/U information and Generalized Linear Least Squares Method. This subtask will progress as further relevant information is generated and evaluated using the results of AROBCAD Task 3 and the results from TPP Task 5.TPP Task 5 - *Develop guidance for establishing bounding margins of subcriticality.* No work was conducted during the third quarter of FY 2000 on the draft assessment report of US nuclear criticality safety community (commercial and contractor) practices and methods for establishing bounding margins of subcriticality. Completion of this report will be delayed until after the special invited session (discussed in TPP TASK 3, above) so feedback from industry can be considered.

ATTACHMENT A: IP COMMITMENT AND DELIVERABLE/MILESTONE STATUS

Commitment	Deliverable/Milestone	Due Date	Status
6.1 Assess critical experiments program	1. Assessment report of criticality research program	March 1998	Completed
6.2.1 Perform CSIRC pilot program	1. Identify an experiment to archive	November 1997	Completed
	2. Archive logbook(s) and calculation(s) for that experiment	December 1997	Completed
	3. Videotape original experimenters	January 1998	Completed
	4. Digitize data and calculations	February 1998	Completed
	5. Publish data and calculations	April 1998	Completed
6.2.2 Continue to implement the CSIRC program	1. Collocate logbooks (copies or originals) from all U.S. critical mass laboratories	December 1998	Completed
	2. Screen existing logbooks with original author/experimenter	December 1998	Completed
	3. CSIRC program plan	December 1998	Completed

Commitment	Deliverable/Milestone	Due Date	Status
6.3 Continue and expand work on ORNL sensitivity methods development	1. Technical program plan	July 1998	Completed
	2. Document initiation of priority tasks from the program plan in the quarterly report to the Board	January 1999	Completed
6.4 Make available evaluations, calculational studies, and data by establishing searchable databases accessible through a DOE Internet web site	1. DOE criticality safety web site	March 1998	Completed
	2. Y-12 evaluations on DOE web site	June 1998	Completed
	3. Calculations compiled by the Parameter Study Work Group on DOE web site	September 1998	Completed
	4. Nuclear Criticality Information System Database on DOE web site	March 1999	Completed
6.5.1 Revise and reissue DOE-STD-3007-93	1. Revise DOE-STD-3007-93	September 1998	Completed
6.5.2 Issue a guide for the review of criticality safety evaluations	1. Departmental guide for reviewing criticality safety evaluations	May 1999	Completed
6.6.1 Expand training course at LACEF	1. Expanded LACEF training course	July 1998	Completed
6.6.2 Investigate existing additional curricula in criticality safety	1. Assessment of additional training needs and review of available supplementary curricula	June 1998	Completed
	2. Initiate a program which addresses identified needs	December 1998	Completed
6.6.3 Survey existing contractor site-specific qualification programs	1. Report on the review of site qualification programs	June 1998	Completed
	2. Guidance for site-specific criticality safety training and qualification programs	September 1998	Completed
	3. Guidance to procurement officials specifying qualification criteria for contractor criticality safety practitioners	September 1998	Overdue: Expected completion date is October 2000 - See Recovery Plan in Attachment B.
	4. DOE Field will provide line management dates upon which contractors will have implemented guidance in Deliverable #2, above	March 1999	Overdue: Expected completion date is April 2001 - See Recovery Plan in Attachment B.

Commitment	Deliverable/Milestone	Due Date	Status
6.6.4 Federal staff directly performing criticality safety oversight will be qualified	1. Qualification program for Departmental criticality safety personnel	December 1998	Completed
	2. DOE criticality safety personnel qualified	December 1999	Overdue: Expected completion date is December 2000 - See Recovery Plan in Attachment B
6.7 Each site will conduct surveys to assess line ownership of criticality safety	1. Individual sites issue report of findings	June 1998	Completed
6.8 The Department will form a group of criticality safety experts	1. Charter for Criticality Safety Support Group approved by the NCSPMT	January 1998	Completed
6.9 Create NCSPMT charter and program plan	1. NCSPMT charter	January 1998	Completed
	2. NCSPMT program plan	June 1998	Completed

ATTACHMENT B: RECOVERY PLANS FOR OVERDUE MILESTONES

Recovery Plan for IP Milestone 6.6.3.3: Guidance to procurement officials specifying qualification criteria for contractor criticality safety practitioners (was due 9/98).

Action	To Be Completed By	Responsibility
1. MA issues draft Page Change to Field Management Counsel (FMC) for initial review.	March 2000	Completed
2. FMC comments received and incorporated.	May 2000	Completed
3 FMC approves release of Draft Page Change for review and comment.	May 2000	Completed
4. MA issues draft Page Change for 60-day for review and comment.	May 2000	Completed
5. Comments due; EH starts comment resolution.	July 2000	Reviewers
6. EH-31 completes comment resolution; forwards final draft Page Change to MA.	September 2000	EH
7. MA releases approved Page Change.	October 2000	DP-10

Recovery Plan for IP Milestone 6.6.3.4: DOE Field will provide line management dates upon which contractors will have implemented guidance in Milestone 6.6.3.2 (was due 3/99).

Action	To Be Completed By	Responsibility
1. MA releases approved Page Change (Action #7 of Recovery Plan for Milestone 6.6.3.3).	October 2000	DP-10
2. Contractors inform DOE Field as to dates by which they will have implemented site specific training and qualification programs.	April 2001	Field
3. Field reports status to DP-10.	April 2001	Field

Recovery Plan for IP Milestone 6.6.4.2: DOE criticality safety personnel qualified (was due 12/99).

Action	To Be Completed By	Responsibility
1. DP will inform the FMC about the Federal Qualification Program.	June 1999	Completed

2. Publish Federal Qualification Standard.	November 1999	Completed
3. Lead Program Secretarial Officers (LPSOs) Task Field Managers.	March 2000	Completed
4. Fed Qual Plans submitted to site managers.	May 2000	Completed
5. DOE criticality safety personnel qualified.	December 2000	Field